In the Claims:

No claims are amended in this response.

1. (previously presented) A single-photon generation device comprising a laser-light source, a wave-guide-type quasi-phase-matching $LiNbO_3$ that converts one photon from said laser-light source into two photons with a common wavelength, a beam splitter that separates the two photons, a single-photon detector that detects one of the separated photons, and an optical switch that puts the other of the separated photons in and is controlled with the detection signal of said single-photon detector, wherein said single photon detector comprises a long gate period.

2. (previously presented) A single-photon generation device comprising a laser-light source, a non-degenerate wave-guide-type quasi-phase-matching $LiNbO_3$ that converts one photon from said laser-light source into two photons with different wavelengths, a dichroic mirror that separates the two photons with the different wavelengths, a single-photon detector that detects one of the separated photons, and an optical switch that puts the other of the separated photons in and is controlled with the detection signal of said single-photon detector, wherein said single photon detector comprises a long gate period.

3. (previously presented) A single-photon generation device comprising a laser-light source, a bulk-type quasi-phase-

matching $LiNbO_3$ that converts one photon from said laser-light source into two photons and put them out to different directions, a single-photon detector that detects one of the separated photons, and an optical switch that puts the other of the separated photons in and is controlled with the detection signal of said single-photon detector, wherein said single photon detector comprises a long gate period.

4. (previously presented) The single-photon generation device according to claim 3, wherein said long gate period comprises between 20 ns and 50 ns.

5. (previously presented) The single-photon generation device according to claim 3, wherein said laser-light source comprises a CW laser.

6. (previously presented) The single-photon generation device according to claim 3, wherein said long gate period comprises 20 ns.

7. (previously presented) The single-photon generation device according to claim 3, wherein said long gate period comprises 50 ns.

8. (previously presented) The single-photon generation device according to claim 1, wherein said long gate period comprises between 20 ns and 50 ns.

9. (previously presented) The single-photon generation device according to claim 1, wherein said laser-light source comprises a CW laser.

10. (previously presented) The single-photon generation device according to claim 2, wherein said long gate period comprises between 20 ns and 50 ns.

11. (previously presented) The single-photon generation device according to claim 2, wherein said laser-light source comprises a CW laser.

12. (previously presented) The single-photon generation device according to claim 1, wherein said long gate period comprises 20 ns.

13. (previously presented) The single-photon generation device according to claim 1, wherein said long gate period comprises 50 ns.

14. (previously presented) The single-photon generation device according to claim 2, wherein said long gate period comprises 20 ns.

15. (previously presented) The single-photon generation device according to claim 2, wherein said long gate period comprises 50 ns.